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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/792,072	03/03/2004	Hideyuki Kakinuma	4296-171 US	4211

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EXAMINER	
DESAI, ANISH P	

ART UNIT	PAPER NUMBER
1771	

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/792,072	KAKINUMA ET AL.	
	Examiner	Art Unit	
	Anish Desai	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) *12* is/are withdrawn from consideration.

5)☐ Claim(s) *1-11* is/are allowed.

6)☒ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The applicant's arguments in response to the Office action dated 02/08/06 have been fully considered.

1. Claims 1-12 are pending. Claim 12 is withdrawn. Support for amended claims is found in the specification.

2. Claim objections are withdrawn in view of the present amendment and response (see page 8 of 08/07/06 amendment).

3. All of the art rejections are maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1,2,4-6,and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Butterbach et al. (US 5,512,625) substantially set forth in 02/08/06 Office action.

Butterbach et al. teach a thermoplastic hot-melt adhesive that is useful in automotive fields such as roof and foam for head restraints (Column 4, lines 18-20). Moreover, the hot melt adhesive of Butterbach et al. is suitable for bonding plastics such as polypropylene and polyethylene (Column 4, lines 13-15). Regarding claims 1 and 8, the thermoplastic hot melt adhesive of Butterbach et al. comprises an amorphous poly

alpha olefin (Column 2, line 42-43), tackifying resins (Column 3, lines 11-18), and a polypropylene wax disclosed by the trade name PP-Wachs or Hoechst Wachs PP 230 (Column 3, line 23 and Column 7, lines 9-10 of Table 2). With respect to the melting viscosity of poly alpha olefin of 500-100,000 mPa*s/190°C, Butterbach et al. teach Eastoflex P 1060 amorphous poly alpha olefin (see Column 2, line 44, Table 1 and Table 2). The melting viscosity of Eastoflex 1060 is 6000 cP at 190°C, as evidenced by the Table 1 of US 5,965,657. The melting viscosity of 6000 cp equates to 6000 mPa*s (using 1 cP = 1 mPa*sec). With respect to the softening point of the tackifier resin not less than 110°C using ring and ball method, although Butterbach et al. do not explicitly teach the softening point of the tackifier resin not lower than 110°C using ring and ball method, it is reasonable to presume that the tackifier resin of Butterbach et al. necessarily has the softening point of the tackifier resin not lower than 110°C determined by ring and ball method. Support for such presumption is found in the use of the like materials. For example the applicant is using Arkon resins as tackifier resins and Butterbach et al. also disclose the use of tackifier resins namely Arkon products (Column 3, line 17). Alternatively, since the inventions of Butterbach et al. and the applicant have the same utility, namely in the field of automobile trim materials therefore, the tackifier resin of Butterbach et al. would necessarily have the ring and ball softening point of not lower than 110°C in order to successfully practice the invention of Butterbach et al. Regarding the melting point of a polypropylene wax not lower than 120°C, although Butterbach et al. do not explicitly teach the melting point of a polypropylene wax not lower than 120°C, it is reasonable to presume that the

polypropylene of Butterbach et al. has the melting point of not lower than 120°C because like materials have like properties. Recall that, Butterbach et al. teach Hoechst Wachs PP 230 wax, which is a polypropylene wax (see Table 2 at Column 7).

With respect to the claim limitation of the weight ratio of (A) to (C) in the range of 100/50 to 100/100 and 100/50 to 100/80, Butterbach et al. teach the claimed invention except that the weight ratio of (A) to (C) in the range of 100/50 to 100/100 and 100/50 to 100/80, however since the concentration is recognized as a result-effective variable, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical or provides unexpected results. Therefore, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the weight ratio of A) to (C) in the range of 100/50 to 100/100 and 100/50 to 100/80, motivated by the desire to increase the tackiness of the hot melt composition. This is in line with *In re Aller*, 220 F.2d 454, 456,105 USPQ 233, 235 (CCPA 1955) which holds that the discovering the optimum or workable ranges involves only routine skill in the art.

Regarding claims 1, 2, 8, and 10, the plastics of polyethylene and polypropylene (Column 4, lines 18-20) coated with hot melt adhesive of Butterbach et al. read on the outer layer. With respect to claims 4 and 9, Butterbach et al. teach that the hot melt adhesive comprises 20 to 70% by weight of amorphous poly alpha olefin and 20 to 40% by weight of tackifiers (Column 3, lines 34-39), which read on the claimed ratio of (A) the amorphous poly alpha olefin to (B) the tackifier resin in the range of 100/10 to

100/100 and 100/30 to 100/60. Regarding claim 5, although Butterbach et al. do not teach the claimed thickness of the hot melt in the range of 10-500 μm, it is known in the automotive industry to apply the hot melt adhesive having a thickness in the instantly claimed range as evidenced by US 5,180,628 which discloses the thickness of the hot melt adhesive in the range of 0.05 mm to 0.5 mm. The thickness of 0.05 mm to 0.5 mm equates to 50 μm to 500 μm (using 1 mm = 1000 μm).

5. Claims 1, 3, 6-8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haardt et al. (US 5,180,628) in view of Butterbach et al. (US 5,512,625) substantially set forth in 02/08/06 Office action.

Haardt et al. teach shock-absorbing propylene polymer composite molding that can be used for production of motor vehicles for example door panels, consoles, sun visors, bumpers, and spoilers (Column 3, lines 65-68). The shock absorbing molding propylene molding contains layer of polypropylene (a), an intermediate layer of hot melt adhesive based on olefin copolymer (b), propylene based foam layer (c), an intermediate layer of hot melt adhesive (d), and a propylene layer (e). Regarding claims 1,3, 7, and 11, the polypropylene layer (a) of Haardt et al. reads on the claimed outer layer material formed of thermoplastic sheet and the polypropylene foam layer (c) of Haardt et al. reads on the polyolefin foam layer jointed to the back surface thereof by adhesion as claimed in the instantly claimed subject matter.

Haardt et al. are silent as to teaching of an amorphous poly alpha olefin having melting viscosity in the range of 500-100,000 mPa*s/190°C, a tackifier resin having softening point determined by the ring and ball method of not lower than 110°C, and

polypropylene wax having melting point of not lower than 120°C as main components thereof, a weight ratio of (A) to (C) in the range of 100/50-100/100 as claimed in claims 1 and 8, weight ratio of (A) the amorphous poly alpha olefin to (B) the tackifier resin in the range of 100/10-100/100 as claimed in claim 8, and hotmelt as claimed in the claims 3 and 11. However, Butterbach et al. teach a thermoplastic hot-melt adhesive that is useful in automotive fields such as roof and foam for head restraints (Column 4, lines 18-20). Moreover, the hot melt adhesive of Butterbach et al. is suitable for bonding plastics such as polypropylene and polyethylene (Column 4, lines 13-15). The thermoplastic hot melt adhesive of Butterbach et al. comprises an amorphous poly alpha olefin (Column 2, line 42-43), tackifying resins (Column 3, lines 11-18), and a polypropylene wax PP-Wachs (Column 3, line 23 and Column 7, lines 9-10 of Table 2). With respect to the melting viscosity of poly alpha olefin of 500-100,000 mPa*s/190°C, Butterbach et al. teach Eastoflex P 1060 amorphous poly alpha olefin (see Column 2, line 44, Table 1 and Table 2). The melting viscosity of Eastoflex 1060 is 6000 cP at 190°C, as evidenced by the Table 1 of US 5,965,657. The melting viscosity of 6000 cp equates to 6000 mPa*s (using 1 cP = 1 mPa*sec). With respect to the softening point of the tackifier resin not less than 110°C using ring and ball method, although Butterbach et al. do not explicitly teach the softening point of the tackifier resin not lower than 110°C using ring and ball method, it is reasonable to presume that the tackifier resin of Butterbach et al. necessarily has the softening point of the tackifier resin not lower than 110°C determined by ring and ball method. Support for such presumption is found in the use of the like materials. For example the applicant is using Arkon resins

as tackifier resins and Butterbach et al. also disclose the use of tackifier resins namely Arkon products (Column 3, line 17). Alternatively, since the inventions of Butterbach et al. and applicant have the same utility, namely in the field of automobile trim materials to apply the hot melt adhesive over the components of an automotive interior trim, therefore the tackifier resin of Butterbach et al. would necessarily have the ring and ball softening point of not lower than 110°C in order to successfully practice the invention of Butterbach et al. Regarding the melting point of a polypropylene wax not lower than 120°C, although Butterbach et al. do not explicitly teach the melting point of a polypropylene wax not lower than 120°C, it is reasonable to presume that the polypropylene was of Butterbach et al. has the melting point of not lower than 120°C because like material has like property. Note that Butterbach et al. teach Hoechst Wachs PP 230 wax which is a polypropylene wax (see Table 2 at Column 7).

Regarding claims 1 and 8, although Haardt et al. as modified by Butterbach et al. do not explicitly teach the weight ratio of (A) to (C) in the range of 100/50 to 100/100, however since the concentration is recognized as a result-effective variable, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical or provides unexpected results. Therefore, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the weight ratio of (A) to (C) in the range of 100/50 to 100/100, motivated by the desire to increase the tackiness of the hot melt composition. This is in line with *In re Aller*, 220 F.2d 454, 456,105 USPQ 233, 235 (CCPA 1955) which holds that the

discovering the optimum or workable ranges involves only routine skill in the art. Additionally with respect to claim 8, Butterbach et al. teach that the hot melt adhesive comprises 20 to 70% by weight of amorphous poly alpha olefin and 20 to 40% by weight of tackifiers (Column 3, lines 34-39), which read on the claimed ratio of (A) the amorphous poly alpha olefin to (B) the tackifier resin in the range of 100/10 to 100/100.

Thus, it would have been obvious to one having skill in the art to apply the hot melt adhesive of Butterbach et al. as discussed above as an intermediate hot melt adhesive layer d on the polypropylene foam layer, motivated by the desire to improve the adhesion between the propylene foam layer and the propylene layer of the shock-absorbing propylene polymer composite molding.

Response to Arguments

6. Applicant's arguments filed 08/07/06 have been fully considered but they are not persuasive.

The 103 rejections of Butterbach et al. are maintained for the following reasons. The applicant argues that the hotmelt of the presently claimed invention does not comprise crystalline poly-alpha-olefin and oligomer of an alpha-olefin as taught by Butterbach. Thus, the applicant asserts that the invention of Butterbach is completely different from the presently claimed invention. The examiner respectfully disagrees. It is agreed that the hotmelt adhesive of Butterbach comprises crystalline poly-alpha-olefin and oligomer of an alpha-olefin. However, note that claims 1 and 8 recite, "A pre-applied outer layer...a hotmelt having...in the range of 100/50-100/100." The claim

language does not exclude substantially crystalline poly-alpha-olefin and oligomer of an alpha-olefin from the hotmelt composition. Additionally, the applicant argues that a hotmelt comprising a noncrystalline olefin polymer, namely amorphous polyolefin, a crystalline ethylene polymer and crystalline polypropylene wax, and a tackifier resin is at a disadvantage in that it has an unduly low 180-degree peel strength, an unduly large creep at 100 °C., or both, as described at page 5, lines 17-27 of the present patent application. The applicant asserts that the hotmelt of Butterbach et al. resembles just such a composition. The examiner respectfully disagrees. The applicant's arguments are not found persuasive in determination of patentability because the applicant has attempted to compare his/her invention with the prior art reference (J -A-HEI 12-226561) that is cited on page 5, lines 17-27 of the specification rather than comparing the claimed invention with the closest prior art. Additionally, there is nothing on the record that would indicate that the aforementioned hotmelt by the applicant is a fair representation of the closed prior art. Additionally no evidence of unexpected results is found.

Applicant argues that Butterbach et al. neither suggests nor discloses that the hotmelt is capable of adhering to various substrates at an active temperature in the range of 100°C to 150°C while remaining resistance to a temperature of 100°C. The applicant's arguments are not found persuasive in determination of patentability because the arguments are not commensurate in scope with the claims. Nothing in the claims teaches or suggests that the hotmelt is capable of adhering to various substrates

at an active temperature in the range of 100°C to 150°C while remaining resistance to a temperature of 100°C.

103 rejections of Haardt et al. in view of Butterbach et al. are maintained for the following reasons. Regarding the applicant's argument that Haardt et al. neither suggest nor disclose a pre-applied outer layer material for automotive interior trim, which comprises having applied to the back surface of an automotive interior trim a hotmelt, the examiner has nothing more to add but to state that the examiner's comments set forth above in this Office action are sufficient in rebutting the applicant's argument. Additionally, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Accordingly, art rejections are maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anish Desai whose telephone number is 571-272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

APD

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